Please replace the paragraph beginning on page 1, line 23 and ending on page 1, line 29 with the new paragraph shown below.

A1

A server computer may deliver applications to many different types of clients through many different types of media. For example, the server can be delivering a page to a printer through a cable, a note to a pager through radio waves, an audio message to a cellular phone through microwave, a web page to an Internet enabled computer or a palmtop through infrared radiation, a movie to a television through optical fibers, or an on-off command to the switch of a microwave oven or the central air-conditioning system of a house through twisted pairs.

Please replace the paragraph beginning on page 1, line 31 and ending on page 2, line 5 with the new paragraph shown below.

A2

Each of these clients or appliances have different capabilities. Some of them can have relatively powerful microprocessors and memory capacity, such as a palmtop. Others can be ultra-thin clients with minimal computation and memory power, such as a television. The delivery media can be very different. For example, some have large bandwidth, such as optical fibers; but others have low bandwidth, such as twisted pairs. Also, the applications can be quite diverse. For example, a movie requires large bandwidth, low latency, and is quite tolerant to error rates; but an on-off command to a switch has to be absolutely accurate, though the bandwidth requirement is low.

Please replace the paragraph beginning on page 8, line 22 and ending on page 9, line 2 with the new paragraph shown below.

In one embodiment, the server side includes an appliance-specific transducer 150 and an adaptive-transmission transducer 152. In general terms, the appliance-specific transducer 150 modifies (step 177) an application based on the capability of the client; and the adaptive-transmission transducer 152 further modifies (step 181) the application based on the transmission medium 154. The modification can also depend on the application itself; for example, an audio signal is modified in a different way as compared to a piece of written text. In one embodiment, the client includes a decoder 156 and a user-interface 158. The decoder 156 interprets or decodes (step 185) the delivered signal, which, may have previously been tailored to the capability of the decoder 156. Then, the user-interface 158 presents the modified application 187 to a user.

A3

Please replace the paragraph beginning on page 10, line 24 and ending on page 10, line 26 with the new paragraph shown below.

A4

In one embodiment, the output from the appliance-specific transducer 150 is an appliance-specific output 179, which is further modified by an adaptive-transmission transducer 152.

Please replace the paragraph beginning on page 10, line 28 and ending on page 11, line 6 with the new paragraph shown below.

A5

The adaptive-transmission transducer 152, based on the characteristics of the application and the transmission medium 154, modifies the appliance-specific output 179 to generate an adapted output 183. In one embodiment, the compression algorithm and the network protocol to be operated on the appliance-specific output 179 depend on at least one characteristic of the application, such as the reliability or error

rate of the application required, and the speed or bandwidth of the transmission medium 154. After the appliance-specific output 179 is modified to generate the adapted output 183, the server sends the adapted output 183 through the transmission medium to the client.

Please replace the paragraph beginning on page 11, line 8 and ending on page 11, line 12 with the new paragraph shown below.

FIG. 5 shows one embodiment of the adaptive-transmission transducer 152 of the present invention. It includes a multimode compressor 250 and an adaptive packetizer 252. The compressor selects the appropriate compression algorithm to compress the appliance-specific output 179, while the adaptive packetizer 252 selects the network protocol to generate the adapted output 183.

Please replace the paragraph beginning on page 11, line 14 and ending on page 11, line 26 with the new paragraph shown below.

FIG. 6 shows examples of the characteristics of transmission media for the present invention. The different characteristics can be in the bandwidth, error rates and latency. Latency represents how long a client has to wait for an application. A medium with a high error rate implies that data going through such a transmission medium 154 tends to have more errors. To compensate for such deficiencies, an application might have to be re-sent to ensure the right signal has been received. This increases latency. For example, an analog signal, 300, transmitted through air--a wireless analog signal--has high error rate, 302, because signal interference can be high. Since the signals might have to be transmitted a number of times to ensure accuracy, the latency of the signal increases, 304. Depending on the application and the transmission

Cont A7 medium 154 to be used, the adaptive-transmission transducer 152 automatically takes into account such variations, for example, by selecting the appropriate compression algorithm and network protocol.

Please replace the paragraph beginning on page 13, line 6 and ending on page 13, line 9 with the new paragraph shown below.

A8 In one embodiment, the adaptive-transmission transducer 152 not only selects the compression algorithm, it also selects the network protocol. This can be done by the adaptive packetizer 252. To illustrate the present invention, three protocols are considered, and they are TCP, UDP and RTP.

Please replace the paragraph beginning on page 14, line 1 and ending on page 14, line 13 with the new paragraph shown below.

A9 FIGS. 9A-B illustrate an example of a decision tree of the present invention for a Web browsing application 400. As shown in FIG. 9A, if the appliance or the client is a television 402, then the appliance-specific transducer 150 will select the sub-transducers of a DocTV and an InternetTV. The output from the appliance-specific transducer 150 is further modified, as shown in FIG. 9B. For example, a part of the application is a piece of text, so the data type, 404, is text, 406. Also, the transmission medium 154, or the connection 408, is wired LAN, 410, with bandwidth of 10 mega bits per second (Mbps). Further assume that the computing power, 412, of the appliance is low, such as less than 10 million instructions per second (Mips). Then, following the decision tree, the adaptive-transmission transducer 152 will select RLE as the compression algorithm and UDP as the network protocol. After the modification, the output will be transmitted through the wired LAN to the appliance, which in this case is a television 402.